mortality ratios in, in males	see also Vocal cords
64:130, 132 mortality ratios in, in smokers	Laws
64:149	PL 89-92, requirements for smoking hazards literature review
mortality ratios in, Japanese male smok-	71:7
ers vs. nonsmokers	PL 91-222, requirements for smoking
<b>73</b> :76, 77	hazards literature review
mortality ratios, pipe smokers vs. non-	71:7
smokers	Lead arsenate
67:35	64:61
mortality trends in 64:137	Leaf constituents
in nonwhites	hydroxy-coumarin as
64:209	64:145 Leather workers
recurrent, incidence in smokers vs. ex-	bladder neoplasm prevalence in
smokers	64:222, 224
73:71,74-77	Leukem <u>ia</u>
relationship of tobacco use and develop-	and cigarette smoke
ment of	67:148
71:354-357	and tobacco tars
relative risk for cigar, pipe, and cigarette smokers	67:148 Leukocytes
72:67; 73:76, 77, 197-199	effects of cigarette smoke on, in guinea
relative risk ratios from tobacco use	pigs
71:277, 358	75:77, 78
retrospective studies of	Leukoplakia
64:205-209	64:233
risk ratios in	experimentally induced, in rabbits
64:209	64:203
in Seventh Day Adventists	oral neoplasm development in smokers and
64:209 smokers vs. nonsmokers	72:68, 69
69:58-59	as precancerous lesion,
smoking in etiology of	64:142
64:32, 188, 189; 72:4, 67, 68	prevalence in tobacco chewing coal
summary of previous findings on rela-	miners
tionship to smoking	73:75
68:89, 90; 74:57	reverse smoking and,
summary of retrospective studies	73:76
73:198, 199	smoking and betel nut chewing 69:58
susceptibility to 64:189	smoking in etiology of
in Sweden, retrospective study of	72:68, 69
64:205, 207	see also Stomatitis nicotina
vitamin deficiency in	Licorice
64:212	64:62 Life expectancy
in women	U.S.males, by cigarette consumption
64:234	68:9, 10
Laryngitis reversibility of	Lip neoplasms
64:275	chewing tobacco in
Larynx	64:202
atypical nuclei in cells of smokers	cigarette smoking in etiology of
69:58-59	73:190, 191
effect of cessation of smoking on	cigar smoking in etiology of 73:190, 191
69:59	mortality rates in United States
epithelial changes in, classification of 71:281, 283	67:145
epithelial changes in, smoke induced	pipe smoking in etiology of
64:275	64:32, 37, 188, 197, 204; 67:35,
hamster, C-14 labeled particulate deposi-	145; 71:289; 72:4; 73:190, 191
tion in	relative risk in pipe, cigar, and cigarette smokers vs. nonsmokers
71:281-282	73:190, 191
histological changes in cigar, pipe, ciga-	retrospective studies of, by type of
rette smokers vs. nonsmokers	smoking
73:197	64:201
premalignant changes in, and smoking 69:5, 55	snuff in
UF.J, JJ	64:202

summary of retrospective studies	Luminescence
73:192	techniques of, use in determining aro-
tobacco use relation to	matic hydrocarbons in urine
64:233; 71:361, 362, 365, 367	71:297
see also Mouth neoplasms; Oral neo-	Lung diseases
p lasm s	infections, and smoking, role in lung
Lipoproteins	neoplasm development
infiltration in arterial walls, carbon mon-	74:47, 48
oxide effects on	in rabbits, similar to emphysema
71:63	69:41
in smokers vs. nonsmokers	in women
71:99-102	64:289
Liquid paraffins	see also Bronchitis; Bronchitis, chronic;
64:51	Emphysema; Respiratory symptoms;
Liver	Respiratory tract diseases
	Lung function
nicotine effects on	
64:342	see Pulmonary function; Respiratory
Liver cirrhosis	function tests Lung neoplasms
64:103, 342	64:143, 144, 167
and alcohol consumption	air pollution in etiology of
67:40	
mortality rates, and smoking	67:140;68:98, 99; 71:11; 73:72
67:39, 184-185	amount smoked in
mortality rates, by age	64:105, 155, 175
67:184	anaplastic
mortality rates, by amount smoked	<b>64</b> :159, 160
67:184	in animals
mortality rates, by sex	<b>68</b> :93
67:184	asbestos exposure and smoking as risk
	factors
mortality ratios, by age	74:41-43; 75:49
67:184	in asbestos workers, by smoking habit
mortality ratios, by daily amount smok-	67:143
ed	benzo(a)pyrene induction of
67:184	64:147
mortality ratios, by sex	and blood cholesterol levels in male
67:184	smokers
mortality ratios, by smoking classifica-	69:57
tion for men	causality
67:184	64:30, 31, 37
rates among cigarette smokers	
71:5	cigarette smoking in
and smoking	64:31, 149, 175-196, 231; 71:11
67:39, 184-185	and cigar smoking
Lobeline	67:34, 138-140
	classification of, in smokers vs. non-
as antitobacco agent	smokers
64:70, 354	67:140-141
Local anesthetics	classification systems compared
64:354	64:174
London	decrease in risk of for ex-smokers
mortality from smog	69:57; 75:43
64:295	detection of by sputum analysis of
London Transport Executive	smokers
cough and smoking among male em-	69:58
ployees of	
64:281, 286	development in dogs following cigarette
	smoke inhalation
Longevity	71:239
64:99	and development of chronic bronchitis
constitutional differences in	<b>75:4</b> 9
64:112	early smoking factor in
Longshoremen	64:158
coronary death rates in	effect of air pollution and smoking
64:323	75:44, 47
pulmonary function in	effect of cessation of smoking on
64:292	67:15-17, 34, 139-140
respiratory conditions in	effect of sex on development
64:289	71:11
Los Angeles County General Hospital Study	environmental and atmospheric factors
64:173	71:252-255
W T 1 1 1 2	

epidemiological methods 64:175-189	incidence in Norway
epidemiological studies	69:55-56 incidence in pipe smokers
69:55-58; 72:60-65; 73:68-72;	68:95
74:37, 38; 75:44 epidermoid, in male smokers	incidence in smokers vs. nonsmokers in India
69:57	74:37, 38
epithelial change in 64:168, 170, 172	incidence in smokers vs. nonsmokers in
etiology of	Jersey, Channel Isles 73:70
64:8; 72:59, 60	incidence in smokers vs. nonsmokers in
excessive smoking in 64:7	LaPlata, Argentina 73:70
experimental	incidence in smokers vs. nonsmokers in
67:35, 144-145; 74:43-52	Philadelphia
experimental induction by cigarette smoke	73:70 incidence in uranium miners
67:144	72:64, 65
experimental induction by radioactive substances	incidence in women 68:97; 69:4, 57
67:128	incidence in women smokers vs. non-
experimental induction by tobacco	smokers
smoke constituents 67:145	74:39, 40 income class gradients in
ex-smoker risk in	64:134
64:158 filtering of tobacco	increased mortality from 64:25, 26, 128, 135, 136, 139, 140.
68:97	141, 185, 220, 231, 232
foreign-born mortality rate in	increase in mortality of female smokers
64:134 genetic factors and	75:47 inhalation patterns and
64:167, 190, 191, 192, 193	73:203
genetic factors and smoking as risk fac- tors	Kreyberg classification of 64:35, 159, 173, 174
74:37	Kreyberg study
group characteristics of tobacco use in smokers and nonsmokers	69:55-56 in men, smoking as cause
71:240, 244, 329-333	67:33, 131
groupings 71:246-334	microscopic determination of 64:140
in heavy smokers	mortality from chromium compounds
64:151, 196, 230, 232	71:257-258
histology of 64:159, 160, 167-173; 67:140-144	mortality rates 64:36, 105, 133, 134, 135, 138, 139,
histology of, and smoking	140, 141, 176; 67:8, 34, 140; 68:68;
71:246-249; 74:38, 39, 44-46 in human beings and laboratory animals	69:57 mortality rates, age-specific
67:145	64:36
immunologic response to benzo(a)pyr- ene-induced tumor, in animals	mortality rates, by age 67:132-137; 68:94-99
74:48, 49	mortality rates, by amount smoked
incidence by smoking classification	64:105, 175; 67:134-140
67:34 incidence in British males by amount	mortality rates by cigarette consump- tion, by country
smoked 72:62	64:176 mortality rates, by degree of inhalation
incidence in cigar and/or pipe smokers	67:134-136
vs. nonsmokers 74:39, 40	mortality rates, by sex 67:134, 140; 68:94-99
incidence in cigar smokers	mortality rates, by smoking charac-
68:95, 96	teristics
incidence in Czechoslovakian males by amount smoked	67:131-140 mortality rates, by smoking classification
72:61	67:34, 138-140
incidence in Jewish vs. non-Jewish wom- en	mortality rates, by smoking history 67:134-137
72:63, 64	mortality rates, effect of cessation of
incidence in male smokers	smoking on
69:4	67:4, 15, 34, 139

```
mortality ratios in Japanese males by
mortality rates expected in U.S. in 1970
  71:237. 239
                                                     amount smoked
                                                     72:61
mortality rates, for men
   64:132, 175, 176; 67:132, 134-135.
                                                 mortality ratios in Japanese women
   137, 139-140; 74:43
                                                    72.63
                                                  mortality ratios in, variables affecting
mortality rates, for women
   64:132, 135, 175; 67:34-35, 133-134, 136, 153
                                                     64:163
                                                  mortality studies of, limitations of
mortality rates in asbestos workers,
                                                     64:163
   smokers vs. nonsmokers
                                                  multiple primary, autopsy findings
   73:73
                                                     67:141-142
mortality rates in Britain
                                                  multiple primary, in smokers
   64:195
                                                     67:35
mortality rates in British physicians vs.
                                                  mustard gas in
   general population
                                                     64:195, 196
   67:16-17;73:70
                                                  nonrespondent rates, in surveys of
mortality rates in, errors in measurement
                                                     64:151
                                                  oat-cell, in male smokers
   of
   64:140
                                                     69:57
                                                  observed mortality in
mortality rates in, occupational differ-
                                                     64:118
   ences in
   64:95
                                                  occupational exposures
                                                     64:193, 194; 71:12
mortality rates in, sex differences in
                                                  occupational exposures and smoking
   64:177, 178, 179
mortality rates in smelter workers ex-
                                                     73:67
                                                  particle deposition in bronchi and site of
   posed to arsenic
                                                     74:44, 45
   71:257
                                                  Philadelphia Pulmonary Neoplasm Re-
mortality rates in smokers
   64:29, 162
                                                     search Project histopathologic study
                                                     74:38
mortality rates in smokers and nonsmok-
                                                  pipe and cigar smoking in
   71:240-243
                                                     64:31, 37, 192, 196, 233
mortality rates in smokers in Norway
                                                  pipe smoking
   and Finland
                                                     67:34, 138-140
   71:245-246
                                                  and polonium
                                                     67:128
mortality rates in Sweden
                                                  prevalence in females
   64:176
                                                     64:37
mortality rates in United States
                                                  prevalence in males
   67:34;71:239
                                                     64:35,37
mortality rates, smoking and
                                                  prevalence in males and females by
   67:3, 10, 34
                                                     tumor type
mortality rates, smoking duration and
                                                     71:246, 250
   64:36, 175; 71:240, 244
                                                  prevalence in smokers vs. nonsmokers in
mortality ratios
   64:103, 113, 148, 149, 162, 175
                                                     Czechoslovakia
mortality ratios, by amount smoked
                                                     73:70
   67:134-140
                                                  prevalence of, age factors in
                                                     64:177, 178, 179
mortality ratios, by degree of inhalation
   67:134-136
                                                  prevalence of, in smokers
mortality ratios, by sex
                                                     64:151
                                                  prevalence ratios in
   67:134, 140
                                                     64:182, 184, 185
mortality ratios, by smoking charac-
                                                  previous respiratory history in
   teristics
   64:164; 67:134-136
                                                     64:195, 196
mortality ratios, by smoking classifica-
                                                  prospective study in Czechoslovakian
   tion
                                                     males
   67:138-140
                                                     72:61
mortality ratios, by smoking history
                                                  prospective study in Japanese adults
   67:134-137
                                                     72:4, 60, 61; 73:68, 69
                                                  race as a factor, smokers vs. nonsmokers
mortality ratios for cigar, pipe, and
                                                     73:70
   cigarette smokers vs. nonsmokers
                                                  radioactive induction of
   73:203-205
                                                     64:172
mortality ratios for women
                                                  reduction in number using filter-type
   67:34-35, 136, 153
                                                     cigarettes
mortality ratios in Japanese by amount
   smoked and age started smoking
                                                  relationship of asbestos and smoking to
   73:69
```

relationship of chronic bronchitis and smoking to	and ulcers, relation to smoking 69:57
72:62 relative risk in cigar, pipe, and cigarette	in uranium miners by smoking habit 67:143
smokers vs. nonsmokers 73:203, 206-208	World Health Organization classification of
relative risk in ex-smokers by length of	64:173, 174
cessation and previous duration of	Xenon-133 washout technique for detec-
habit 72:62-64	tion of
relative risk in ex-smokers vs. continuing	74:43, 44  see also Respiratory tract neoplasms; and
smokers	specific histological types
73:72	Lungs
relative risk in pipe/cigar smokers	alveolar tissue, effect of smoking on
73:67, 68 retrospective studies of	64:274, 275; 67:30 arterioles, effect of pipe/cigar smoking
64:150-165, 230, 231	vs. cigarette smoking on
retrospective study methods for smoking	73:217
relationships	bactericidal activity, effect of nitrogen
71:240, 323-328	dioxide on, in mice
risk ratios in 64:160, 183, 184, 185, 187, 188	74:103 compliance
risk reduction with filter vs. nonfilter	64:292
cigarettes	effect of cigarette smoke in laboratory
<b>74:40</b> , 41	animals
role of aryl hydrocarbon hydroxylase	67:106
activity and polyaromatic hydro- carbons in	effect of cigarette smoke on tissue 64:274; 71:343-345
74:49-52	effect of nitrogen dioxide
role of pulmonary infections and smok-	64:266; 69:41
ing in etiology of	hamster, C-14 labeled particulates depo-
74:47, 48	sition in
and selenium in cigarettes 67:128	71:281-282 histology of pipe/cigar smokers vs. ciga-
in Seventh Day Adventists	rette smokers
64:322	73:217
sex ratios in 64:133	histopathological differences in smokers
sex ratio statistic	vs. nonsmokers
74:40	73:48, 49 hygiene
smoke inhalation in, urban-rural differ-	64:267, 268
ences in	injury
64:133, 186, 194, 195 and smokers	64:270
69:4-5	lesions
of smokers, in Rhodesia	64:73, 295 parenchyma
69:57	64:27, 35, 167, 263, 264, 272, 301
smoking in etiology of	parenchyma, effect of smoking on
67:32-34, 141-144; 71:3, 237, 276; 72:4, 5, 59, 60; 73:67	67:144
and smoking in men	pathological changes in emphysema pa- tients by smoking history and sex
67:34	67:105
and smoking in women	pathological effects of smoking on
67:10, 34; 71:246, 251	64:165-172; 69:5
summary of previous findings	physiology, new animal model for test-
75:3, 5-8 summary of previous findings on rela-	ing of 74:102
tionship to smoking	polonium-210 levels, smokers vs. non-
68:89, 90; <b>74</b> :35-37	smokers
summary of recent findings	67:128
75:43	scars and susceptibility to carcinogens 69:64
summary of retrospective studies	see also Respiratory system
73:206-208	Lymphosarcoma
types implicated in smoking	and cigarette smoke
71:237 typing of	67:148 and tobacco tars
64:35, 159, 173, 174, 175	67:148

Lysozyme	Masculinity
secretion by rabbit pulmonary alveolar macrophages	64:383, 384, 385 smoking behavior association with
. 69:42	64:372, 373 Massachusetts General Hospital
Macraphagas alvadar	64:141, 174
Macrophages, alveolar decrease in pinocytosis, in smokers vs.	Mass spectrometry 64:51
nonsmokers	Maternal-fetal exchange
75:76	effect of nicotine
effect of cigarette smoke on 67:110; 69:42; 71:165; 73:52, 53;	72:88 polycyclic hydrocarbons and
74:50	73:119
effect of nitrogen dioxide 73:54	see also Smoking, maternal
effect of tobacco smoke	Maternal smoking
72:47, 48	see Smoking, maternal Maximum breathing capacity
lysozyme secretion in rabbits	64:290
69:42 and pathogenesis of chronic bronchopul-	Mayo Clinic
monary disease	64:322 Mean expiratory flow rate
64:43	64:290
reduction of enzymes in smokers 69:42-43	Measurement errors
response to migration inhibition factor	in smoking studies 64:97, 111
or antigens, in smokers vs. nonsmok-	Men
ers 75:76-77	arteriosclerosis obliterans in
75:76, 77 in sputum specimens of smokers vs.	64:326
nonsmokers	bladder neoplasms in 64:219, 222, 224, 255
72:48	breathlessness in
Macrophages, peritoneal effect of nicotine on, in mice	64:286, 287
74:105	bronchitis prevalence in 64:289
Macrophages, pulmonary	chest illness in
effect of cigarette smoke extract, in sheep lungs	64:288
74:105	chronic cough in 64:281, 282, 285
effect of cigarette smoke, in guinea pigs 75:77, 78	college students, smoking patterns in 64:369
effect of cigarette smoke, in rabbits	coronary diseases in
74:104, 105	64:321, 322, 327
effect of smoking 72:3, 4, 47-48;73:55	cough and sputum prevalence in 64:284
morphologic differences in smokers vs.	epithelial change in
nonsmokers	64:170, 173
72:4, 47-48 summary of recent findings	forced expiratory volume in 64:290, 291
75:78	increased lung neoplasm prevalence in
Mainstream smoke see Smoke streams	64:192
Malathion	irreversible obstructive lung disease in
64:62, 145	64:288, 289 laryngeal neoplasms
Malaya	64:212
betel nut-tobacco chewing in 64:203	lung neoplasms in
Mammals	64:183, 186 lung neoplasms in, by amount smoked
effect of cigarette smoke tars on cells 71:343	64:155
nicotine metabolism in	lung neoplasms in, eigarette smoking in relation to
64:71, 72, 73, 74	64:31.37
Marihuana 64.240	lung neoplasms in, early smoking in
64:349 Marital status	64:158
bladder neoplasms and	lung neoplasms in, prevalence of 64:231
64:224	lung neoplasms in, prevalence of, in
smoking prevalence by 64:364	Seventh Day Adventists 64:363

mortality rates in	squamous, in stomatitis nicotina
64:28, 85	64271
mortality ratios in	squamous, nickel carbonyl in
64:28	64:166
mortality trends in	Methacrolein
64:133, 135, 192	as suspected contributor to health haz-
neoplasm mortality in, by site	ards of smoking
64:132	72:145
neoplasm mortality rates in	Methane
64:135, 137, 175, 176	in tobacco smoke 64:60
neoplasm mortality ratios in 64:130, 132, 175	Methanol
nonsmokers, U.S. incidence of, by age	64:60
64:178	Methoxy-coumarin
oral neoplasms	64:145
64:202, 204	Methyl alcohol
risk ratios in	as suspected contributor to health haz-
64:161	ards of smoking
risk ratios in, in bladder neoplasms	72:145
64:222	6-Methylanthranthrene
single, mortality trends in	carcinogenicity, as component of ciga-
64:101	rette smoke
smokers, U.S. incidence of, by age	72:66
64:178	Methyl chloride
smoking and respiratory symptoms in	64:60
64:286	3-Methylcholanthrene
smoking habits of	64:166
64:231	effects during pregnancy in laboratory
smoking patterns in	animals
64:177, 178, 179	73:117
smoking prevalence in	20-Methylcholanthrene
64:363	64:203-228 Methyl ethyl ketone
sputum production in 64:283	64:52, 60
Menopause	Methylglycerol
and cardiovascular disease, in women	64:62
smokers vs. nonsmokers	N-methylnicotinamide
74:10, 19	urinary excretion, effect of smoking
coronary death rates following	67:156, 71:297
64:321	Methyl nitrite
1,8-p-Menthadiene	64:60
64:51	Methyl protoanemonin
Menthol	carcinogenicity of
64:62	64:145
Mesenchymal tumors	Metrazol
classification of	treatment of depression with
64:174	64:352 Metropolitan Life Insurance Company
Mesotheliomas	64:344
classification of 64:174	Mice
Metal mine workers	bladder neoplasms in, induction by
pulmonary function in	tryptophan metabolites
64:299	71:296
Metals	embryo, lethal effects of nicotine on
as carcinogens	71:411
64:166, 167, 189, 193, 194, 230,	esophageal epithelium of, alcoholic ben-
232 Metal-working trades	zo(a)pyrene penetrability of
neoplasm risks in	71:292
64:134	esophageal epithelium of, oil-dissolved benzo(a)pyrene penetrability of
Metaplasia	71:292
64:170	genetic variation in
anaplasia, lung neoplasms and	64:167
64:172	induction of bladder neoplasms in
as precancerous change	64:219, 223
64:166	induction of bronchitis in
squamous, experimentally induced in	64:272
lungs by cigarette smoke	induction of epidermoid neoplasms in
67:144	64:166

induction of hepatomas in 64:145	impairment of pulmonary function in 64:299
induction of oral neoplasms in 64:202	mucous gland hyperplasia in 64:271
induction of neoplasms in 64:143, 144, 146	respiratory symptoms in 64:298, 299
induction of pulmonary adenomas in 64:143, 144	Minnesota Multiphasic Personality Inven- tory
induction of skin neoplasms in 64:143	64:366
induction of squamous cell carcinoma in 64:228	Mitochondria effect of tobacco smoke on, in rat liver 74:104
inhibition of phagocytic clearance in 64:269	Molders neoplasm risk in
irritation in, by formaldehyde 64:260	64:134 Mollusks
lung neoplasm incidence in, from chro- mium oxide dust exposure 71:258	ciliary function in, effect of cigarette smoke on 71:223
lungs of, effects of cigarette smoke on 64:165; 71:159, 343, 344	Monkeys atherogenic effects of carbon monoxide
pulmonary carcinoma induction in, fol- lowing asbestos dust inhalation	and hypoxia 71:64
71:257 pulmonary changes from chronic nitro-	ciliary function in, effect of cigarette
gen oxide inhaltion 71:161, 220	71:222
pulmonary clearance in, cigarette smoke	fetal bronchial tubes of, effects of ciga- rette smoke on
effects on 71:170	71:345 rhesus, development of bladder neo-
resistance to pneumonia bacteria follow-	plasms from 2-naphthylamine
ing cigarette inhalation 71:173	71:296
respiratory tract of, cigarette smoke in-	squirrel, nitrogen oxide effects on resist- ance to pneumococcus
halation effect on	71:173
71:268-269, 349-353 skin painting of, smoke condensates ef-	Monoamine oxidase inhibitors effect on rabbits receiving nicotine
fects on	69:27
71:267, 337-342	Monohydric alcohols
spontaneous neoplasms in 64:165	64:52 Morbidity
spontaneous pulmonary adenomas in 64:165	bladder neoplasms, and smoking 67:155
Migrants	bronchitis, and smoking
lung neoplasm rates in 64:194	67:3, 30, 96-99
Migration	bronchitis, in smoking discordant twin
lung neoplasm risks in	67:102-103
64:195 Migration inhibition factor	chronic bronchopulmonary diseases 72:39-41: 73:36-39
effects on alveolar macrophages, in	coronary diseases, smokers vs. non-
smokers vs. nonsmokers 75:76, 77	smokers 67:53-54
Mill workers	emphysema, and cigar smoking
breathlessness in 64:286	67:97
chronic cough in	emphysema, and pipe smoking 67:97
64:280	emphysema, and smoking
chronic respiratory disease in 64:289, 299	67:3, 30, 96-99 lung neoplasms, and smoking
Mineral oil	67:3
carcinogenicity of	peptic ulcers, and smoking
64:147, 148, 229 Miners	67:40 respiratory diseases, smokers vs. non-
forced expiratory flow rates in	smokers among college students
64:290 forced expiratory volume in	67:98
64:293, 294	respiratory symptoms 75:62, 63

and smoking	in Danish twins, smoking effects on
67:6, 19	71:49-51 development of COPD in smokers vs.
and smoking in college students 67:98	nonsmokers
and smoking in 45-64 age group	71:145, 195-205
67:24	myocardial infarction, by risk factors in
studies of	males
64:127, 133, 293, 294	68:23
Morbidity rates	myocardial infarction, smokers vs. non-
bronchitis, by age and smoking history 67:96-98	smokers 67:59
bronchitis, by sex and smoking history	myocardial infarction, smokers vs. non-
67:96-98	smokers by physical activity
coronary disease, smokers vs. nonsmok-	67:56
ers by age	Mortality rates 64:25, 27, 30, 35, 36, 37, 84, 101, 162
67:54	301
emphysema, by age and smoking history 67:96-98	by age
emphysema, by sex and smoking history	67:9-10, 12-13, 23
67:96-98	by age, and smoking history
smokers vs. ex-smokers	67:10; 68:6
67:15	by age, for men 67:9, 10
smokers vs. nonsmokers, by age	by age, for women
67:19-24 smokers vs. nonsmokers, by amount	67:23
smoked	age started smoking and
67:19-24	64:29, 111
smokers vs. nonsmokers, by sex	alcoholism, relation to smoking
67:19-24	67:10 amount smoked and
smokers vs. nonsmokers, by smoking	64:111; 67:9, 23
history 67:19-24	aortic aneurysm, for men by amount
Morbidity ratios	smoked
angina pectoris, by smoking habit in	69:16
males	arteriosclerosis 64:25, 321; 67:28
68:20	bladder neoplasms, by amount smoked
angina pectoris, smokers vs. nonsmokers,	67:155
67:59	bladder neoplasms, by sex
coronary diseases 69:19	67:154
coronary diseases, smokers vs. nonsmok-	bladder neoplasms, by smoking classifi- cation
ers	67:155
67:59; 71:21-22, 24, 30-35	bladder neoplasms, effect of cessation of
coronary diseases, smokers vs. nonsmok-	smoking on
ers and lung function 67:56	67:155
coronary diseases, smokers vs. nonsmok-	bladder neoplasms, for men by age 67:154
ers by age	bladder neoplasms, in United States
67:54	67:154
coronary diseases, smokers vs. non-	from bladder neoplasms in U.S. for 1967
smokers by blood cholesterol levels	71:293
67:55 coronary diseases, smokers vs. nonsmok-	bronchitis
ers by blood pressure values	64:25, 297; 67:8, 90-91; 68:66-68 bronchitis, and smoking
67:55	67:3, 90-96
coronary diseases, smokers vs. nonsmok-	bronchitis, effect of cessation of smok-
ers by personality characteristics	ing on
67:57 coronary diseases, smokers with predis-	67:94, 96
posing factors	from bronchopulmonary disease 71:141-145
71:24	71:141-143 cardiovascular diseases
coronary diseases, smoking and	69:17
71:32-35, 37, 39	cerebrovascular diseases, and athletic ac-
coronary diseases, smoking habit in	tivity
males 68:17, 18	67:68
coronary diseases, retrospective studies	cerebrovascular diseases, and coronary_ disease history
71:40, 93-97	67:68
	-1100

```
cerebrovascular diseases, and parental
                                                  coronary diseases, retrospective studies
   death history
                                                  coronary diseases, smokers vs. ex-
   67:68
                                                     smokers
cerebrovascular diseases, and smoking
                                                     67:9;69:15
   67.68
                                                  coronary diseases, smokers vs. ex-smok-
cerebrovascular diseases, by age
                                                     ers by amount smoked
   67:66; 75:31
cerebrovascular diseases, by sex
                                                     67:49
                                                  coronary diseases, smokers vs. ex-smok-
   67:66; 75:31
cerebrovascular diseases, smokers vs.
                                                     ers by smoking history
                                                     67:51
   nonsmokers
                                                  coronary diseases, smokers vs. nonsmok-
    71:66-67, 68-70
cerebrovascular diseases, smoking classi-
                                                     69:12-13, 15-17; 71:24, 26-29;
   fication
   67:66; 75:31
                                                     74:3-6
                                                  coronary diseases, smoking and
in chronic bronchopulmonary disease
   64:301;72:38,39;73:36-39
                                                     67:10, 27, 65-66
in chronic bronchopulmonary disease,
                                                  in Danish twins, smoking effects on
   cigar/pipe smokers vs. cigarette smok-
   ers and nonsmokers
                                                  differences in rates, defined
   73:216, 217
cigar smokers vs. nonsmokers
                                                  digestive tract neoplasms, by amount
   67:8
                                                     smoked
in cigar smoking
                                                     67:147
   64:30;67:7
                                                  digestive tract neoplasms, by smoking
compared rates for cigarette vs. pipe/ci-
                                                      classification
   gar ex-smokers
                                                      67:147
   73:172, 173
                                                  duration of smoking in
Connecticut data on
                                                      64:29, 36
   64:132
                                                  early smoking and, excess in, in smokers
coronary diseases
                                                      64:29, 30, 35, 36, 84, 111, 162, 301
   64:25, 320, 321; 67:8, 25-28, 47; 71:21; 75:14
                                                      64:25; 67:3-4, 8, 90-91; 68:66-68
coronary diseases, among physicians
                                                  emphysema, effect of cessation of smok-
   68:17
                                                      ing on
coronary diseases, and age
                                                      67:7, 24, 29
   67:47, 50-51; 69:13-14; 74:6; 75:14
                                                  esophageal neoplasms
coronary diseases, by amount smoked
                                                      67:150, 153; 68:102; 71:289
   67:51:69:12-13, 17
                                                  esophageal neoplasms, by age
coronary diseases, by blood cholesterol
                                                      67:150
   69:17
                                                  esophageal neoplasms, by amount smok-
coronary diseases, by blood pressure
                                                     ed
   69:14, 17
                                                      67:150
coronary diseases, by relative weight
                                                  esophageal neoplasms, by smoking classi-
   69:14
                                                      fication
coronary diseases, by sex
                                                      67:150
   67:47, 50; 69:13-14
                                                  esophageal neoplasms, for men by age
coronary diseases, by smoking habit
                                                      67:150
   67:51;69:14
                                                  esophageal neoplasms, for women
coronary diseases, effect of cessation of
                                                     67:153
   smoking on
                                                  esophageal neoplasms in Japanese males
   67:25, 28, 47-49, 50
                                                      by smoking and drinking characteris-
coronary diseases in Japanese men and
                                                      tics
   women by cigarette consumption and
                                                      72.71
   age started smoking
                                                  in former smokers, relation to CHD
   73:7,8
                                                      71:46, 47-48
coronary diseases in middle-aged men in
                                                   in heavy smokers
   seven countries
                                                      64:36, 107, 111, 163
   74:6
                                                   .nhalation patterns and
coronary diseases in survivors of myo-
                                                      64:111;68:5
   cardial infarction, smokers vs. non-
                                                   from kidney neoplasms in U.S. for 1967
   smokers
                                                      71:296
   74:4-6
                                                  in laryngeal neoplasms
coronary diseases, male smokers vs. ex-
                                                      64:205; 67:153; 68:101, 102
   smokers by age
                                                   laryngeal neoplasms, by age
                                                      67:148-149
coronary diseases, paired combinations
                                                  laryngeal neoplasms, by amount smoked
   of high risk characteristics in 71:25
                                                      67:149
```

laryngeal neoplasms, by sex	from lung neoplasms in smelter workers
67:148 laryngeal neoplasms, by smoking classi-	exposed to arsenic 71:257
fication 67:149	lung neoplasms, pipe smokers 67:140
laryngeal neoplasms, for women 67:148	lung neoplasms, reduction in, British physicians
from laryngeal neoplasms, in Japanese	67:15
smokers vs. nonsmokers	male-female ratios in
68:102	64:133
lip neoplasms, in United States 67:145	mouth neoplasms, by age and amount smoked
liver cirrhosis, and smoking	67:146
67:40, 184	mouth neoplasms, by smoking classifica- tion
liver cirrhosis, by age 67:184	67:146
liver cirrhosis, by amount smoked 67:184	mouth neoplasms, for women 67:153
liver cirrhosis, by sex 67:184	mouth neoplasms, in United States 67:145-146
liver cirrhosis, for men	from myocardial infarction
67:184	75:14
lung neoplasms	neoplasms 64:128, 129, 130, 131, 132, 136,
64:25, 29; 67:8, 153; 68:68, 94-99; 69:57	137, 138, 139
lung neoplasms, and smoking	neoplasms, by site, in women
67:3	64:132
lung neoplasms, by age	neoplasms, increase in
67:34, 134-137, 140	64:127, 136
lung neoplasms, by amount smoked 67:137, 140	neoplasms, in Japanese smokers vs. non- smokers
lung neoplasms, by birth cohorts 67:131-133	68:17 in nonwhites
lung neoplasms, by sex	64:218
67:134, 137, 140	occupations
lung neoplasms, by smoking characteris-	64:134;67:11
tics	from oral neoplasms in 1967
67:134-136, 140	71.285
lung neoplasms, by smoking classifica-	overall rates for cigar smokers vs. pipe
tion 67:136, 140	smokers 73:179, 180
lung neoplasms, by smoking exposure	overall rates for pipe/cigar smokers and
67:34	dose-response relationships 73:180-189
lung neoplasms, by smoking habit 67:136, 140 /	overall rates for pipe/cigar smokers vs.
lung neoplasms, by smoking history	nonsmokers
67:134-137	73:179, 180 overall rates from cancer in pipe and
lung neoplasms, cigar smokers	cigar smokers
67:34, 140	73:189
lung neoplasms, effect of cessation of	pancreatic neoplasms
smoking on 67:34, 140	68:103; 72:74 pancreatic neoplasms by age
lung neoplasms, effect of reduction of	67:158-159
smoking on	pancreatic neoplasms, by amount smok-
67:4	ed 67:159
from lung neoplasms expected in 1970 71:237, 239	pancreatic neoplasms, by sex 67:153, 158, 159
lung neoplasms, ex-smokers	pancreatic neoplasms, by smoking classi-
67:140	fication
lung neoplasms, for men	67:159
67:34, 131, 133-137, 139-140	paralysis agitans
from lung neoplasms for 1939 vs. 1967	67:8
in U.S. 71:239	peptic ulcer 67:40 191 192:71:422
lung neoplasms, for women	67:40, 181-182; 71:423 peptic ulcer, by age
67:132-133, 136, 153; 75:47	67:181
lung neoplasms in Japanese women	peptic ulcer, for men
72:63	67:181-182

```
study of Chicago Peoples Gas Light and
peptic ulcer, smokers vs. ex-smokers
   67:181
                                                      Coke Co. employees
pharyngeal neoplasms
                                                      69:16-17
67:153
pharyngeal neoplasms, by smoking classi-
                                                   summary of previous findings
                                                      75:3-8, 13
   fication
                                                   summary of previous findings on rela-
   67:35
                                                      tionship to smoking
pharyngeal neoplasms, for women
                                                      68:5-10
   67:153
                                                   trends
in pipe smokers
                                                      64:135,140
   64:30; 68:6
                                                   urinary tract neoplasms, by age
pipe smokers vs. nonsmokers
                                                      67:154
   67:10
                                                   urinary tract neoplasms, by amount
Poisson distribution of
                                                      smoked
   64:117, 118
                                                      67:154
reduction in, effect of cessation of smok-
                                                   urinary tract neoplasms, by smoking
   ing
                                                      classification
   67:16
                                                      67:154
from renal neoplasms in males, by age,
                                                   urogenital neoplasms, by age
   type and smoking habit
                                                      67:154
   68:105, 106
                                                   U.S. male veterans from CHD
respiratory tract neoplasms, and smoking
                                                      71:26.38
   67:5-7, 9-10, 147
                                                    in veterans
rural vs. urban
                                                      64:88, 293
   64:133;67:11
                                                    in women
in selected diseases
                                                      64:133
   64:26
                                                    in women smokers
by sex
                                                       67:7,9;68:6,8,9
   67:12-13
of smokers, non- and ex-smokers
                                                Mortality ratios
   68:5-8, 69
                                                   64:36, 84, 99, 101, 118, 119; 69:12-13,
                                                      18
smokers vs. ex-smokers
   67:9, 15
                                                   after cessation of smoking
                                                      64:29, 111
smokers vs. ex-smokers, by smoking his-
                                                   age effects on
   tory
                                                      64:36,87
   67:9
                                                   alcohol consumption and
smokers vs. nonsmokers
   67:8-9, 19; 71:3
                                                      64:112
                                                   by amount smoked
and smoking
   67:5-9; 69:3
                                                      67:150, 153
by smoking history
                                                   aortic aneurysm, for men by amount
   67:9-10, 23
                                                      smoked
stomach neoplasms, by age
                                                      69:16
   67:157-158
                                                   behavioral factors in
stomach neoplasms, by amount smoked
                                                      64:101
   67:157-158
                                                   bladder neoplasms
stomach neoplasms, by smoking classi-
                                                      67:36, 154
   fication
                                                  bronchitis
   67:157-158
                                                      64:28, 29, 293; 67:90, 94
stomach neoplasms, effect of cessation
                                                  cerebrovascular diseases, by age
   of smoking
                                                      67:66
67:157-158
stroke
                                                  cerebrovascular diseases, by sex
                                                      67:66
   69:17
                                                  cerebrovascular diseases, by smoking
stroke, by age
67:67; 69:12-13
                                                      classification
                                                     67:66
                                                  in cigarette smokers
64:28, 29, 35
in coronary diseases
64:29, 184
stroke, by amount smoked
   67:67; 69:12-13
stroke, by sex
   69:12-13
                                                  coronary diseases, associated with other
stroke, smokers vs. ex-smokers
                                                     complicating diseases
                                                  coronary diseases, by age
67:25-26, 49, 51-52; 69:12-13, 18
coronary diseases, by amount smoked
67:49
                                                     67:52
stroke, smokers vs. nonsmokers
   69:12-13, 15
in Swedish twins, smokers vs. nonsmok-
   ers
   71:51
                                                  coronary diseases, by blood pressure
studies of
   64:100
```

67:49; 69:12-13	67:184
coronary diseases, by smoking habit	liver cirrhosis, by sex
67:51-52	67:184
coronary diseases, by smoking history 67:25-26	liver cirrhosis, by smoking classificatio 67:184
coronary diseases, by sociocultural mo-	liver cirrhosis, for men
bility status	67:184
67:57 coronary diseases, for men by age	liver cirrhosis, for men by amount smok
67:48	67:184
coronary diseases, for men by amount	longevity and
smoked	64:99, 100
67:48	lung neoplasms and 64:28, 29, 133, 163, 164, 175-189
coronary diseases, smokers vs. ex-smok- ers	lung neoplasms, by age
69:15	67:134-140
coronary diseases, smokers vs. nonsmokers	lung neoplasms, by amount smoked
69:12-13, 15	67:135, 137-140
coronary diseases, with high risk charac-	lung neoplasms, by sex
teristics, estimated 71:25	67:135, 137-140 lung neoplasms, by smoking characteri
daily cigarette consumption and	tics
64:89	67:134-136
definition of	lung neoplasms, by smoking classifica
64.28, 117, 67:11, 68.6	tion
duration of smoking in 64:111	67:139-149 lung neoplasms, cigar smokers
educational level factors in	67:140
64:112	lung neoplasms, for men
in emphysema	67:34, 134-135, 137-139
64:28, 29	lung neoplasms, for women
esophageal neoplasms, by age	67:34, 153
67:150 esophageal neoplasms, prospective and	lung neoplasms, in Japanese males by amount smoked
retrospective studies	72:61
71:289-291	lung neoplasms, in males by cigarette
in ex-smokers	smoking duration
64:104	71:240, 244
genetic factors in 64:36, 412, 113	lung neoplasms in smokers in Norway and Finland
in influenza, in smokers	71:246
64:276	lung neoplasms, pipe smokers
inhalation effects on	67:140
64:36, 91, 92	measurement limitations of
internal consistency of 64:130	64:98 mouth neoplasms
laryngeal neoplasms	67:35
67:35; 71:277-279	mouth neoplasms, by age and amount
laryngeal neoplasms, by age	smoked
67:149	67:146
laryngeal neoplasms, by amount smoked 67:149	mouth neoplasms, by smoking classification
laryngeal neoplasms, by smoking classi-	67:146
fication	mouth neoplasms, cigar smokers vs. non-
67:149	smokers
laryngeal neoplasms, eigar smokers vs.	67:35, 146
nonsmokers 67:35	mouth neoplasms, for women 67:153
laryngeal neoplasms, for men by age	mouth neoplasms, pipe smokers vs. non-
67:148-149	smokers
laryngeal neoplasms, for women	67:35, 146
67:153	neoplasms, by site 64:149
laryngeal neoplasms, pipe smokers vs.	in occasional smokers
67:35	64:163
liver cirrhosis	occupational exposure and
64:342;67:184	64:112

```
pancreatic neoplasms, by sex
                                                  stroke, by sex
   67:158
                                                     69:12-13
pancreatic neoplasms, for men by age
                                                  stroke, for men
   67:159
                                                     67:67
pancreatic neoplasms, for men by
                                                  stroke, for men by amount smoked
   amount smoked
                                                     67:67
   67:159
                                                  stroke, smokers vs. ex-smokers
pancreatic neoplasms, for men by smok-
                                                     69:15
                                                  stroke, , smokers vs. nonsmokers
69:12-13, 15
   ing classification
   67:159
                                                  thrombosis, by age
pancreatic neoplasms, for women
                                                     67:36
   67:153
                                                  thrombosis, by smoking history
from pancreatic neoplasms in smokers
   and nonsmokers
                                                     67:26
                                                  underestimation of
   71:289-299
                                                     64:111
peptic ulcer, for men by age
                                                  urban-rural differences in
   67:181
                                                     64:99
from peptic ulcer in smokers and non-
                                                  urinary tract neoplasms, by age
   smokers
                                                     67:154
   71:424
                                                  urinary tract neoplasms, by smoking
peptic ulcer, smokers vs. ex-smokers by
                                                     classification
   age
   67:181
                                                     67:154
                                                  urogenital neoplasms, by amount smoked
pharyngeal neoplasms
   67:35
                                                     67:154
pharyngeal neoplasms, by age and
                                                 in white population
   amount smoked
                                                     64:132
   67-146
                                              Motor vehicle exhaust
                                                 hydrocarbons as
pharyngeal neoplasms, by smoking class-
                                                    64:296
   ification
                                              Mouth
  67:146
                                                 retention of tar in
pharyngeal neoplasms, cigar smokers vs.
                                                    64:264
   nonsmokers
                                              Mouth epithelium
   67:35
                                                 histopathological change in
pharyngeal neoplasms, for women
                                                    64:271
   67:153
                                                 keratinization of
pharyngeal neoplasms, pipe smokers vs.
                                                    64:203
   nonsmokers
                                                 smoking effect on
   67:35
                                                    64:275
pharyngeal neoplasms, smokers vs. non-
                                              Mouth neoplasms
   smokers
                                                 and cigar smoking by age
   67:3
                                                    67:146
in pipe and cigar smokers by age and
                                                 and cigar smoking in men
   inhalation
                                                    67:146
   73:184, 187
                                                 experimental induction by pipe tobacco
previous respiratory history and
                                                    smoke
   64:112
                                                    67:147-148
psychological factors in
                                                 frequency in smokers and nonsmokers
   64:101
                                                    71:238
sampling in
                                                 mortality rates, by age
   64:95, 98, 99
                                                    67:146
smokers vs. nonsmokers, from lung neo-
                                                 mortality rates, by amount smoked
   plasms
                                                    67:146
    71:240-243
                                                 mortality rates, by smoking classification
stability of
                                                    67:146-147
   64:117
                                                 mortality rates, for women
stomach neoplasms, by age
                                                    67:153
                                                 mortality rates in United States
stomach neoplasms, by amount smoked
                                                    67:145
   67:157
                                                 mortality ratios
stomach neoplasms, by smoking classi-
                                                    67:35
   fication
                                                 mortality ratios, by smoking classifica-
   67:157
stroke, by age
                                                    67:35, 146
   69:12-13
                                                 mortality ratios, cigar smokers, men, by
 stroke, by amount smoked
                                                    age
67:146
   69:12-13
```

mortality ratios, for men by age 67:146	cholesterol levels and relapse rate 68:23
mortality ratios, for pipe smokers 67:35, 146	coffee drinking, smoking and 74:8; 75:19, 20
and smoking	coronary thrombosis and 64:321
67:35, 145-147 smoking induced	damage to rabbits after exposure to
71:12 and tobacco use	carbon monoxide 75:29
67:145 in women, smokers vs. nonsmokers	in Danish twins 71:51
67:153 see also Gingival neoplasms; Lip neo-	epidemiological study in Goteborg, Swe- den
plasms; Oral neoplasms; Palatal neo-	72:14, 15, 16
plasms; Salivary gland neoplasms; Tongue neoplasms	etiology of 69:27-28
Mucociliary transport	etiology of, smoking as
effect of smoking	64:325
74:101, 102	fatal, incidence of, and smoking
Mucopolysaccharides	67:59
function as surfactants in lung tissue 71:172	in German, Japanese, and Norwegian smokers vs. nonsmokers
Mucous cells	68:18, 19
hyperplasia in	incidence in European vs. American men
64:272 hypertrophy of	73:9 incidence in male smokers vs. nonsmok-
64:271	ers
increase in number of 64:269	68:18, 19, 23 incidence in men in Yugoslavia
Mucous glands	73:9
abnormalities, in smokers vs. nonsmok-	incidence in men with and without
ers 74:97	ventricular premature beats 74:10
morphological changes in	incidence in miners in Sardinia
64:35, 268, 271	73:10
Mucous membranes effect of cigarette smoke on	incidence in Minnesota men by age and smoking habit
67:140	72:14, 15
effect of smoking on 67:144	incidence in pipe and cigar smokers 73:215
irritation of 64:73	and incidence of coronary disease 67:53
smoking and neoplasms of 69:58	incidence rates and smoking 69:21-22; 72:15
Mucus	morbidity ratios, for smokers vs. non-
alterations in 64:268	smokers
reduction of, by smoke	67:56, 59 mortality, in smokers vs. nonsmokers
64:270	75:14
secretion 64:268, 269, 270	nonfatal, morbidity ratios, smokers vs.
Muscles, skeletal	nonsmokers 67:59
curariform action of nicotine in	prevalence in current vs. ex-smokers
64:69	74:8
Mussels ciliary function in, effects of cigarette	prevalence in farmers 64:323
smoke on	prevalence in smoking vs. nonsmoking
71:221, 222	men in Czechoslovakia
Mustard gas 64:195, 196	73:10
Mutation rate	recurrence in smokers vs. nonsmokers, in
hypothesized variation in	Buenos Aires 74:9
64:192 Myocardial infarct	and smoking
64:320, 323	69:4, 18; 73:19
acute, and smoking effects on blood	and smoking in India 74:8
circulation in coronary disease pa- tients	summary of previous findings
67:62	75:4, 13

in Swedish women smokers vs. nonsmok- ers	National Clearinghouse for Smoking and Health
75:14	responsibilities
see also Coronary diseases	71:7
Myocardium	survey of smoking, 1970
arteriole wall, effects of filtered cigar-	71:6
ettes in dogs	National Cooperative Pooling Project
72:20	mortality statistics from coronary dis-
arteriole wall thickness in smokers vs.	ease
nonsmokers	71:21-22
72:2, 19	National Heart Institute
arteriole wall thickness in smoking and nonsmoking dogs	64:7
72:2, 20	National Institutes of Health
effect of catecholamines on	64:13
67:60	National Library of Medicine
effect of cigarette smoking on	64:13, 14 assistance in literature review on smok-
67:60; 69:11; 71:5, 8 effect of nicotine on	ing
67:60	71:7
effect of nicotine on catecholamine re-	National Safety Council
lease from	64:344
67:60	National Tuberculosis Association
effect of nicotine on, clinical and exper-	64:8
imental studies	National Vital Statistics Division
<b>67</b> :26	64:134
effects of hydrogen cyanide in smoke on	Natural gas
71:62	respiratory tract carcinoma in workers
oxygen consumption in nicotine stimu-	exposed to
lated	71:256
71:59	Neonates
oxygen demand of, nicotine effects	effect of maternal smoking on
71:38	67:39, 185-187
see also Heart Myosmine	rats, LD 50, nicotine determination 71:412
structural formula of	see also Birth weight; Infant mortality;
64:49	Smoking, maternal
	Neoplasms
	adenomatous, induction in mice by ciga-
	rette smoke inhalation
	71:350
	age-adjusted incidence of
2-Naphthylamine	64:183
development of bladder carcinomas and	benign, in mice
papillomas in dogs, hamsters, and	64:165
monkeys	classification of, by World Health Or-
71:296	ganization
suspected bladder carcinogen in tobacco smoke	64:173 death statistics in, validation of
71:265	64:101
Naphtols	development in smoking dogs, per-
64:54	centages of
Nas (tobacco and ashes)	71:274
and oral neoplasms in the USSR	experimental, bronchogenic carcinoma
69:58	69:63-64
Nasopharyngeal neoplasms	experimental, epidermoid carcinoma
in smokers vs. nonsmokers, in Taiwan	69:64
75:50	experimental, induction by tobacco
National Cancer Institute	smoke
64:7	67:35
Biometry Branch	female mortality trends in
64:137, 138, 139	64:129, 131, 132, 133, 135, 137
National Center for Health Statistics 64:13	induction of
survey of U.S. smoking habits by	64:33, 143, 146, 147, 148, 166
71:5-6	mammalian, cigarette smoke effect on
survey on relationship of smoking and	71:343
incidence of respiratory disease	mortality rates in alcoholics
71:173	73:71

mortality rates in, international statistics	New Zealand
of	coronary death rate in
64:129, 130, 131	64:320
mortality rates in Japan	human experimental data on smoking
68:17	and pregnancy
mortality ratios in, by site	71:408-409 Nickel
64:137, 148, 149	
mortality trends in 64:135, 137	anaplastic changes from 64:166
· · · · · · · · · · · · · · · · · · ·	carbonyl, as a cocarcinogen
occupational factors in 64:147	69:62
prevalence of, smokers vs. nonsmokers	chloride
69:56	64:55
recurrent primary, incidence in smokers	cigarette content of, in ash and smoke
vs. nonsmokers	64:55, 167
73:71, 74	compounds, suspected carcinogenic
by sex	agents in cigarette smoke
69:56	71:265; 72:145
sex ratios in, in mortality	metaplasia and
64:132, 133	64:166
by site	Nickel workers
64:127, 133, 134, 148, 149, 188,	64:193, 194, 232
189, 191, 197, 211	Nicotine
smoke constituents in, as promoters	64:49, 69-75
64:26, 229	absorption of
smoking and	64:73, 74, 349
72:4, 5, 59-75	acceleration of alpha rhythm by
summary of previous findings on rela- tionship to smoking	64:70
68:89, 90; 73:67, 68; 75:3-8	administration of 64:349
summary of recent findings on relation-	
ship to smoking	antigenic properties 72:104
73:88; 74:58, 59; 75:43, 54	atherogenic effects of
by type of tumor and smoking history	71:120-122
69:56	carcinogenic effect of
typing of	64:144
64:35	in cigar, pipe, and cigarette smoke
virus induction of	73:177
64:142, 166  see also Cancer registries; and specific	clinical effects on offspring of smoking
neoplasm terms, e.g., Lung neoplasms	mothers
Nephritis	73:140, 141
64:103	coronary heart disease and
Netherlands	74:13, 19
cigarette smoke inhalation effects on	degradation of
mice respiratory tract in	64:74
71:349	dosage of 64:74, 352
lung neoplasms, methods of retro-	•
spective study of smoking in	in duodenal ulcer induction in cats 73:158, 159
71:323	effect as antidiuretic
serum lipid difference, in smokers vs.	64:69
nonsmokers of	effect as cerebral anoxia
71:101 Neuroticism	64:70
64:365, 366, 367	effect as chronic toxicity
New Haven Study	64:32, 73, 74
64:186	effect as convulsant
Newton, Massachusetts study	64:70
64:368, 369, 370	effect as curariform action
New York City	64:69
myocardial infarctions in cigar and pipe	effect as depressor action 64:74
smokers in	effect as digestive disturbance
71:32, 38-39	64:74
New York State	effect as discharge pattern
cancer registry in <b>64</b> :127, 129	64:70
neoplasm statistics in	effect as emetic
64:135	64:70
- * * * * *	

effect as nausea	effect on gastric secretion in cats
64:71, 74 effect as paralysis of ganglia	73:158, 159 effect on gastric secretion in rats
64:317	73:159
effect as stimulation	effect on gastrointestinal secretion in
64:69	dogs
effect as stimulation of ganglia 64:317	72:6 effect on habituation
effect as tranquilization	64:349-354
64:350	effect on heart blood flow in dogs
effect as vasomotor activity	73:17
64:70,74	effect on heart function
effect during pregnancy 67:186-187	67:60 effect on heart rate
effect during pregnancy in laboratory	67:60; 71:36
animals	effect on hypercholesterolemic rabbits
72:88; 73:115, 116	69:27
effect in "arousal" action	effect on immune response in man 72:109
64:70, 350 effect on adipose tissue, in rats	effect on lactation in laboratory animals
74:13	73:138, 139
effect on apexcardiogram	effect on lactation in smokers vs. non-
72:21	smokers
effect on autonomic nervous system	73:139, 140 effect on lipid biosynthesis in aorta in
67:60 effect on birth weight in rats	dogs
72:88	73:17
effect on blood circulation	effect on lipid metabolism in rabbits
60:61	<b>72</b> :21
effect on blood circulation in coronary	effect on liver 64:342
disease patients 67:61	effect on microcirculation in atrium in
effect on blood lipids	cats
71:123-128	73:17
71.125-120	, 5.1,
effect on blood pressure	effect on monkeys
effect on blood pressure 64:70; 67:60; 71:36	effect on monkeys 64:70
effect on blood pressure 64:70; 67:60; 71:36 effect on blood vessels	effect on monkeys 64:70 effect on mucus secretion
effect on blood pressure 64:70; 67:60; 71:36 effect on blood vessels 67:62	effect on monkeys 64:70 effect on mucus secretion 64:268, 269
effect on blood pressure 64:70; 67:60; 71:36 effect on blood vessels	effect on monkeys 64:70 effect on mucus secretion 64:268, 269 effect on myocardium 67:26, 60
effect on blood pressure 64:70; 67:60; 71:36 effect on blood vessels 67:62 effect on bronchoconstrictor response in laboratory animals 72:46	effect on monkeys 64:70 effect on mucus secretion 64:268, 269 effect on myocardium 67:26, 60 effect on myocardium oxygen demand
effect on blood pressure 64:70; 67:60; 71:36 effect on blood vessels 67:62 effect on bronchoconstrictor response in laboratory animals 72:46 effect on cardiac rhythm of heart	effect on monkeys 64:70 effect on mucus secretion 64:268, 269 effect on myocardium 67:26, 60 effect on myocardium oxygen demand 71:38
effect on blood pressure 64:70; 67:60; 71:36 effect on blood vessels 67:62 effect on bronchoconstrictor response in laboratory animals 72:46 effect on cardiac rhythm of heart 71:36	effect on monkeys 64:70 effect on mucus secretion 64:268, 269 effect on myocardium 67:26, 60 effect on myocardium oxygen demand
effect on blood pressure 64:70; 67:60; 71:36 effect on blood vessels 67:62 effect on bronchoconstrictor response in laboratory animals 72:46 effect on cardiac rhythm of heart 71:36 effect on cardiovascular system	effect on monkeys 64:70 effect on mucus secretion 64:268, 269 effect on myocardium 67:26, 60 effect on myocardium oxygen demand 71:38 effect on myometrial strips in gravidic
effect on blood pressure 64:70; 67:60; 71:36 effect on blood vessels 67:62 effect on bronchoconstrictor response in laboratory animals 72:46 effect on cardiac rhythm of heart 71:36	effect on monkeys 64:70 effect on mucus secretion 64:268, 269 effect on myocardium 67:26, 60 effect on myocardium oxygen demand 71:38 effect on myometrial strips in gravidic women 71:408 effect on nicotine-sensitive cells
effect on blood pressure 64:70; 67:60; 71:36 effect on blood vessels 67:62 effect on bronchoconstrictor response in laboratory animals 72:46 effect on cardiac rhythm of heart 71:36 effect on cardiovascular system 67:60; 71:56-58, 107-118 effect on cardiovascular system in dogs 73:17	effect on monkeys 64:70 effect on mucus secretion 64:268, 269 effect on myocardium 67:26, 60 effect on myocardium oxygen demand 71:38 effect on myometrial strips in gravidic women 71:408 effect on nicotine-sensitive cells 64:69
effect on blood pressure 64:70; 67:60; 71:36 effect on blood vessels 67:62 effect on bronchoconstrictor response in laboratory animals 72:46 effect on cardiac rhythm of heart 71:36 effect on cardiovascular system 67:60; 71:56-58, 107-118 effect on çardiovascular system in dogs 73:17 effect on catecholamine release	effect on monkeys 64:70 effect on mucus secretion 64:268, 269 effect on myocardium 67:26, 60 effect on myocardium oxygen demand 71:38 effect on myometrial strips in gravidic women 71:408 effect on nicotine-sensitive cells 64:69 effect on novice smoker
effect on blood pressure 64:70; 67:60; 71:36 effect on blood vessels 67:62 effect on bronchoconstrictor response in laboratory animals 72:46 effect on cardiac rhythm of heart 71:36 effect on cardiovascular system 67:60; 71:56-58, 107-118 effect on gardiovascular system in dogs 73:17 effect on catecholamine release 67:60; 71:36, 119; 75:29	effect on monkeys 64:70 effect on mucus secretion 64:268, 269 effect on myocardium 67:26, 60 effect on myocardium oxygen demand 71:38 effect on myometrial strips in gravidic women 71:408 effect on nicotine-sensitive cells 64:69 effect on novice smoker 64:70
effect on blood pressure 64:70; 67:60; 71:36 effect on blood vessels 67:62 effect on bronchoconstrictor response in laboratory animals 72:46 effect on cardiac rhythm of heart 71:36 effect on cardiovascular system 67:60; 71:56-58, 107-118 effect on çardiovascular system in dogs 73:17 effect on catecholamine release	effect on monkeys 64:70 effect on mucus secretion 64:268, 269 effect on myocardium 67:26, 60 effect on myocardium oxygen demand 71:38 effect on myometrial strips in gravidic women 71:408 effect on nicotine-sensitive cells 64:69 effect on novice smoker
effect on blood pressure 64:70; 67:60; 71:36 effect on blood vessels 67:62 effect on bronchoconstrictor response in laboratory animals 72:46 effect on cardiac rhythm of heart 71:36 effect on cardiovascular system 67:60; 71:56-58, 107-118 effect on cardiovascular system in dogs 73:17 effect on catecholamine release 67:60; 71:36, 119; 75:29 effect on cate 64:70 effect on chemoreceptor activity	effect on monkeys 64:70 effect on mucus secretion 64:268, 269 effect on myocardium 67:26, 60 effect on myocardium oxygen demand 71:38 effect on myometrial strips in gravidic women 71:408 effect on nicotine-sensitive cells 64:69 effect on novice smoker 64:70 effect on pancreatic secretions in animals 73:161, 162 effect on peripheral vascular system
effect on blood pressure 64:70; 67:60; 71:36 effect on blood vessels 67:62 effect on bronchoconstrictor response in laboratory animals 72:46 effect on cardiac rhythm of heart 71:36 effect on cardiovascular system 67:60; 71:56-58, 107-118 effect on gardiovascular system in dogs 73:17 effect on catecholamine release 67:60; 71:36, 119; 75:29 effect on cats 64:70 effect on chemoreceptor activity 64:69	effect on monkeys 64:70 effect on mucus secretion 64:268, 269 effect on myocardium 67:26, 60 effect on myocardium oxygen demand 71:38 effect on myometrial strips in gravidic women 71:408 effect on nicotine-sensitive cells 64:69 effect on novice smoker 64:70 effect on pancreatic secretions in animals 73:161, 162 effect on peripheral vascular system 71:72, 75, 133-134; 72:25, 26
effect on blood pressure 64:70; 67:60; 71:36 effect on blood vessels 67:62 effect on bronchoconstrictor response in laboratory animals 72:46 effect on cardiac rhythm of heart 71:36 effect on cardiovascular system 67:60; 71:56-58, 107-118 effect on cardiovascular system in dogs 73:17 effect on catecholamine release 67:60; 71:36, 119; 75:29 effect on cats 64:70 effect on chemoreceptor activity 64:69 effect on chemoreflex induction	effect on monkeys 64:70 effect on mucus secretion 64:268, 269 effect on myocardium 67:26, 60 effect on myocardium oxygen demand 71:38 effect on myometrial strips in gravidic women 71:408 effect on nicotine-sensitive cells 64:69 effect on novice smoker 64:70 effect on pancreatic secretions in animals 73:161, 162 effect on peripheral vascular system 71:72, 75, 133-134; 72:25, 26 effect on peritoneal macrophages, in
effect on blood pressure 64:70; 67:60; 71:36 effect on blood vessels 67:62 effect on bronchoconstrictor response in laboratory animals 72:46 effect on cardiac rhythm of heart 71:36 effect on cardiovascular system 67:60; 71:56-58, 107-118 effect on cardiovascular system in dogs 73:17 effect on catecholamine release 67:60; 71:36, 119; 75:29 effect on cats 64:70 effect on chemoreceptor activity 64:69 effect on chemoreflex induction 64:318	effect on monkeys 64:70 effect on mucus secretion 64:268, 269 effect on myocardium 67:26, 60 effect on myocardium oxygen demand 71:38 effect on myometrial strips in gravidic women 71:408 effect on nicotine-sensitive cells 64:69 effect on novice smoker 64:70 effect on pancreatic secretions in animals 73:161, 162 effect on peripheral vascular system 71:72, 75, 133-134; 72:25, 26 effect on peritoneal macrophages, in mice 74:105
effect on blood pressure 64:70; 67:60; 71:36 effect on blood vessels 67:62 effect on bronchoconstrictor response in laboratory animals 72:46 effect on cardiac rhythm of heart 71:36 effect on cardiovascular system 67:60; 71:56-58, 107-118 effect on cardiovascular system in dogs 73:17 effect on catecholamine release 67:60; 71:36, 119; 75:29 effect on cats 64:70 effect on chemoreceptor activity 64:69 effect on chemoreflex induction	effect on monkeys 64:70 effect on mucus secretion 64:268, 269 effect on myocardium 67:26, 60 effect on myocardium oxygen demand 71:38 effect on myometrial strips in gravidic women 71:408 effect on nicotine-sensitive cells 64:69 effect on novice smoker 64:70 effect on pancreatic secretions in animals 73:161, 162 effect on peripheral vascular system 71:72, 75, 133-134; 72:25, 26 effect on peritoneal macrophages, in mice 74:105 effect on pinocytosis, in mouse perito-
effect on blood pressure 64:70; 67:60; 71:36 effect on blood vessels 67:62 effect on bronchoconstrictor response in laboratory animals 72:46 effect on cardiac rhythm of heart 71:36 effect on cardiovascular system 67:60; 71:56-58, 107-118 effect on gardiovascular system in dogs 73:17 effect on catecholamine release 67:60; 71:36, 119; 75:29 effect on cats 64:70 effect on chemoreceptor activity 64:69 effect on chemoreflex induction 64:318 effect on chlorpromazine inhibition 64:70 effect on ciliary activity	effect on monkeys 64:70 effect on mucus secretion 64:268, 269 effect on myocardium 67:26, 60 effect on myocardium oxygen demand 71:38 effect on myometrial strips in gravidic women 71:408 effect on nicotine-sensitive cells 64:69 effect on novice smoker 64:70 effect on pancreatic secretions in animals 73:161, 162 effect on peripheral vascular system 71:72, 75, 133-134; 72:25, 26 effect on peritoneal macrophages, in mice 74:105 effect on pinocytosis, in mouse perito- neal macrophages
effect on blood pressure 64:70; 67:60; 71:36 effect on blood vessels 67:62 effect on bronchoconstrictor response in laboratory animals 72:46 effect on cardiac rhythm of heart 71:36 effect on cardiovascular system 67:60; 71:56-58, 107-118 effect on cardiovascular system in dogs 73:17 effect on catecholamine release 67:60; 71:36, 119; 75:29 effect on cats 64:70 effect on chemoreceptor activity 64:69 effect on chemoreflex induction 64:318 effect on chlorpromazine inhibition 64:70 effect on ciliary activity 64:268	effect on monkeys 64:70 effect on mucus secretion 64:268, 269 effect on myocardium 67:26, 60 effect on myocardium oxygen demand 71:38 effect on myometrial strips in gravidic women 71:408 effect on nicotine-sensitive cells 64:69 effect on novice smoker 64:70 effect on pancreatic secretions in animals 73:161, 162 effect on peripheral vascular system 71:72, 75, 133-134; 72:25, 26 effect on peritoneal macrophages, in mice 74:105 effect on pinocytosis, in mouse perito- neal macrophages 74:105
effect on blood pressure 64:70; 67:60; 71:36 effect on blood vessels 67:62 effect on bronchoconstrictor response in laboratory animals 72:46 effect on cardiac rhythm of heart 71:36 effect on cardiovascular system 67:60; 71:56-58, 107-118 effect on cardiovascular system in dogs 73:17 effect on catecholamine release 67:60; 71:36, 119; 75:29 effect on cates 64:70 effect on chemoreceptor activity 64:69 effect on chemoreflex induction 64:318 effect on chlorpromazine inhibition 64:70 effect on ciliary activity 64:68 effect on ciliary activity 64:268 effect on colon	effect on monkeys 64:70 effect on mucus secretion 64:268, 269 effect on myocardium 67:26, 60 effect on myocardium oxygen demand 71:38 effect on myometrial strips in gravidic women 71:408 effect on nicotine-sensitive cells 64:69 effect on novice smoker 64:70 effect on pancreatic secretions in animals 73:161, 162 effect on peripheral vascular system 71:72, 75, 133-134; 72:25, 26 effect on peritoneal macrophages, in mice 74:105 effect on pinocytosis, in mouse perito- neal macrophages 74:105 effect on pipe/cigar smoke inhalation
effect on blood pressure 64:70; 67:60; 71:36 effect on blood vessels 67:62 effect on bronchoconstrictor response in laboratory animals 72:46 effect on cardiac rhythm of heart 71:36 effect on cardiovascular system 67:60; 71:56-58, 107-118 effect on cardiovascular system in dogs 73:17 effect on catecholamine release 67:60; 71:36, 119; 75:29 effect on cates 64:70 effect on chemoreceptor activity 64:69 effect on chemoreflex induction 64:318 effect on chlorpromazine inhibition 64:70 effect on ciliary activity 64:268 effect on colon 64:71	effect on monkeys 64:70 effect on mucus secretion 64:268, 269 effect on myocardium 67:26, 60 effect on myocardium oxygen demand 71:38 effect on myometrial strips in gravidic women 71:408 effect on nicotine-sensitive cells 64:69 effect on novice smoker 64:70 effect on pancreatic secretions in animals 73:161, 162 effect on peripheral vascular system 71:72, 75, 133-134; 72:25, 26 effect on peritoneal macrophages, in mice 74:105 effect on pinocytosis, in mouse perito- neal macrophages 74:105 effect on pipe/cigar smoke inhalation 73:183, 184
effect on blood pressure 64:70; 67:60; 71:36 effect on blood vessels 67:62 effect on bronchoconstrictor response in laboratory animals 72:46 effect on cardiac rhythm of heart 71:36 effect on cardiovascular system 67:60; 71:56-58, 107-118 effect on cardiovascular system in dogs 73:17 effect on catecholamine release 67:60; 71:36, 119; 75:29 effect on cates 64:70 effect on chemoreceptor activity 64:69 effect on chemoreflex induction 64:318 effect on chlorpromazine inhibition 64:70 effect on ciliary activity 64:68 effect on ciliary activity 64:268 effect on colon	effect on monkeys 64:70 effect on mucus secretion 64:268, 269 effect on myocardium 67:26, 60 effect on myocardium oxygen demand 71:38 effect on myometrial strips in gravidic women 71:408 effect on nicotine-sensitive cells 64:69 effect on novice smoker 64:70 effect on pancreatic secretions in animals 73:161, 162 effect on peripheral vascular system 71:72, 75, 133-134; 72:25, 26 effect on peritoneal macrophages, in mice 74:105 effect on pinocytosis, in mouse perito- neal macrophages 74:105 effect on pipe/cigar smoke inhalation
effect on blood pressure 64:70; 67:60; 71:36 effect on blood vessels 67:62 effect on bronchoconstrictor response in laboratory animals 72:46 effect on cardiac rhythm of heart 71:36 effect on cardiovascular system 67:60; 71:56-58, 107-118 effect on cardiovascular system in dogs 73:17 effect on catecholamine release 67:60; 71:36, 119; 75:29 effect on cates 64:70 effect on chemoreceptor activity 64:69 effect on chemoreflex induction 64:318 effect on chlorpromazine inhibition 64:70 effect on ciliary activity 64:268 effect on colon 64:71 effect on dogs	effect on monkeys 64:70 effect on mucus secretion 64:268, 269 effect on myocardium 67:26, 60 effect on myocardium oxygen demand 71:38 effect on myometrial strips in gravidic women 71:408 effect on nicotine-sensitive cells 64:69 effect on novice smoker 64:70 effect on pancreatic secretions in animals 73:161, 162 effect on peripheral vascular system 71:72, 75, 133-134; 72:25, 26 effect on peritoneal macrophages, in mice 74:105 effect on pinocytosis, in mouse perito- neal macrophages 74:105 effect on pipe/cigar smoke inhalation 73:183, 184 effect on pregnancy 71:411-414 effect on pregnant laboratory animals
effect on blood pressure 64:70; 67:60; 71:36 effect on blood vessels 67:62 effect on bronchoconstrictor response in laboratory animals 72:46 effect on cardiac rhythm of heart 71:36 effect on cardiovascular system 67:60; 71:56-58, 107-118 effect on cardiovascular system in dogs 73:17 effect on catecholamine release 67:60; 71:36, 119; 75:29 effect on cats 64:70 effect on chemoreceptor activity 64:69 effect on chemoreflex induction 64:318 effect on chlorpromazine inhibition 64:70 effect on ciliary activity 64:268 effect on colon 64:71 effect on dogs 64:70	effect on monkeys 64:70 effect on mucus secretion 64:268, 269 effect on myocardium 67:26, 60 effect on myocardium oxygen demand 71:38 effect on myometrial strips in gravidic women 71:408 effect on nicotine-sensitive cells 64:69 effect on novice smoker 64:70 effect on pancreatic secretions in animals 73:161, 162 effect on peripheral vascular system 71:72, 75, 133-134; 72:25, 26 effect on peritoneal macrophages, in mice 74:105 effect on pinocytosis, in mouse perito- neal macrophages 74:105 effect on pipe/cigar smoke inhalation 73:183, 184 effect on pregnancy 71:411-414 effect on pregnant laboratory animals 67:187-188
effect on blood pressure 64:70; 67:60; 71:36 effect on blood vessels 67:62 effect on bronchoconstrictor response in laboratory animals 72:46 effect on cardiac rhythm of heart 71:36 effect on cardiovascular system 67:60; 71:56-58, 107-118 effect on gardiovascular system in dogs 73:17 effect on catecholamine release 67:60; 71:36, 119; 75:29 effect on cats 64:70 effect on chemoreceptor activity 64:69 effect on chemoreflex induction 64:318 effect on chlorpromazine inhibition 64:70 effect on ciliary activity 64:268 effect on colon 64:71 effect on dogs 64:70 effect on fetus in laboratory animals	effect on monkeys 64:70 effect on mucus secretion 64:268, 269 effect on myocardium 67:26, 60 effect on myocardium oxygen demand 71:38 effect on myometrial strips in gravidic women 71:408 effect on nicotine-sensitive cells 64:69 effect on novice smoker 64:70 effect on pancreatic secretions in animals 73:161, 162 effect on peripheral vascular system 71:72, 75, 133-134; 72:25, 26 effect on peritoneal macrophages, in mice 74:105 effect on pinocytosis, in mouse perito- neal macrophages 74:105 effect on pipe/cigar smoke inhalation 73:183, 184 effect on pregnancy 71:411-414 effect on pregnant laboratory animals

offent on makkita	4: i4 £
effect on rabbits	toxicity of
64:70	64:32, 71, 73, 74, 352, 353, 354
effect on rat and mouse fetus, site of	see also Nicotine content; Nicotine me-
action	tabolism; Nicotine pharmacology
73:121	Nicotine content
effect on respiration, clinical experi-	in blood, new assay methods
mental studies	73:15, 23
67:26	and cigarette smoke
effect on respiratory system	72:21
64:70	• • • • •
	and cigarette smoke and tumorigenicity
effect on respiratory tract in rats	67:34
74:104	effects of room size, amount of tobacco
effect on supraopticohypophyseal sys-	burned and ventilation
tem	7 <b>5</b> :91-94, 97
64:69	in little cigars compared to cigarettes and
effect on sympathetic ganglia cells	cigars
<b>64</b> :69	73:223-226, 228
effect on systolic pressure rise	in milk of laboratory animals
64:74	73:138, 139
effect on vascular resistance in dogs	in milk of smoking mothers
67:60	73:139
effect, tolerance to	smoker awareness of
64:353, 354	64:349
effect, toxicity from	and tar content, and tumorigenicity of
64:74	cigarette smoke
effect, tremors from	67:15
64:70	
effect, unpredictability of	and tar content, of cigarette smoke as
<b>64</b> :69	measurement of dosage
	67:15 Nicotine metabolism
excretion, by passive smokers	
75:97	64:31, 71, 72
experimental studies	metabolites
<b>72</b> :21; <b>73</b> :16, 17	69:61-62
hypoxia and	metabolites, excretion of
72:21	64:71,72
induction of necrosis in arterial walls	pathways of, in mammals
71:63	64:72
as most likely contributor to health	see also Cotinine
hazards of smoking	Nicotine pharmacology
	<b>64</b> :32, 69, 70, 71, 72, 317, 318, 319,
<b>72</b> :8, 143	
neurogenic effects of	320, 349 effect of acetylcholine on
71:57	67:60
N-oxides, presence in tobacco smoke	effect of adrenalectomy on
69:62	<b>67</b> :60
oxidized, in vitro ciliostatic effects	effect of tetraethylammonium chloride
69:42	
as potentiator of duodenal ulcers in	on
animals	67:60
73:161-163	Nine-State Study
pyrolysis of	expected deaths in
pyrolysis or	
64.50	64:109
64:59	mortality ratios in
secretion, effect of cigar, pipe and ciga-	mortality ratios in
secretion, effect of cigar, pipe and cigarette smoke in dogs	
secretion, effect of cigar, pipe and cigarette smoke in dogs 73:216	mortality ratios in 64:109, 149
secretion, effect of cigar, pipe and cigarette smoke in dogs 73:216	mortality ratios in 64:109, 149 observed deaths in 64:109
secretion, effect of cigar, pipe and cigarette smoke in dogs	mortality ratios in 64:109, 149 observed deaths in 64:109 Nitrates
secretion, effect of cigar, pipe and cigarette smoke in dogs 73:216 structural formula of 64:49	mortality ratios in 64:109, 149 observed deaths in 64:109 Nitrates in tobacco smoke
secretion, effect of cigar, pipe and cigarette smoke in dogs 73:216 structural formula of 64:49 substitutes for	mortality ratios in 64:109, 149 observed deaths in 64:109 Nitrates in tobacco smoke 67:128
secretion, effect of cigar, pipe and cigarette smoke in dogs 73:216 structural formula of 64:49 substitutes for 64:34, 354	mortality ratios in 64:109, 149 observed deaths in 64:109 Nitrates in tobacco smoke 67:128 Nitric oxide
secretion, effect of cigar, pipe and cigarette smoke in dogs 73:216 structural formula of 64:49 substitutes for 64:34, 354 suppression of immunoglobulin re-	mortality ratios in 64:109, 149 observed deaths in 64:109 Nitrates in tobacco smoke 67:128 Nitric oxide exposure to
secretion, effect of cigar, pipe and cigarette smoke in dogs 73:216 structural formula of 64:49 substitutes for 64:34, 354 suppression of immunoglobulin response, in cell cultures	mortality ratios in 64:109, 149 observed deaths in 64:109 Nitrates in tobacco smoke 67:128 Nitric oxide exposure to 64:266
secretion, effect of cigar, pipe and cigarette smoke in dogs 73:216 structural formula of 64:49 substitutes for 64:34, 354 suppression of immunoglobulin re-	mortality ratios in 64:109, 149 observed deaths in 64:109 Nitrates in tobacco smoke 67:128 Nitric oxide exposure to 64:266 as probable contributor to health haz-
secretion, effect of cigar, pipe and cigarette smoke in dogs 73:216 structural formula of 64:49 substitutes for 64:34, 354 suppression of immunoglobulin response, in cell cultures 75:77	mortality ratios in 64:109, 149 observed deaths in 64:109 Nitrates in tobacco smoke 67:128 Nitric oxide exposure to 64:266 as probable contributor to health hazards of smoking
secretion, effect of cigar, pipe and cigarette smoke in dogs 73:216 structural formula of 64:49 substitutes for 64:34, 354 suppression of immunoglobulin response, in cell cultures 75:77 systemic toxicity of	mortality ratios in 64:109, 149 observed deaths in 64:109 Nitrates in tobacco smoke 67:128 Nitric oxide exposure to 64:266 as probable contributor to health hazards of smoking 72:144
secretion, effect of cigar, pipe and cigarette smoke in dogs 73:216 structural formula of 64:49 substitutes for 64:34, 354 suppression of immunoglobulin response, in cell cultures 75:77 systemic toxicity of 64:71, 73	mortality ratios in 64:109, 149 observed deaths in 64:109 Nitrates in tobacco smoke 67:128 Nitric oxide exposure to 64:266 as probable contributor to health hazards of smoking 72:144 Nitrogen
secretion, effect of cigar, pipe and cigarette smoke in dogs 73:216 structural formula of 64:49 substitutes for 64:34, 354 suppression of immunoglobulin response, in cell cultures 75:77 systemic toxicity of 64:71, 73 tissue storage of	mortality ratios in 64:109, 149 observed deaths in 64:109 Nitrates in tobacco smoke 67:128 Nitric oxide exposure to 64:266 as probable contributor to health hazards of smoking 72:144 Nitrogen gas phase, cigarette smoke
secretion, effect of cigar, pipe and cigarette smoke in dogs 73:216 structural formula of 64:49 substitutes for 64:34, 354 suppression of immunoglobulin response, in cell cultures 75:77 systemic toxicity of 64:71, 73	mortality ratios in 64:109, 149 observed deaths in 64:109 Nitrates in tobacco smoke 67:128 Nitric oxide exposure to 64:266 as probable contributor to health hazards of smoking 72:144 Nitrogen
secretion, effect of cigar, pipe and cigarette smoke in dogs 73:216 structural formula of 64:49 substitutes for 64:34, 354 suppression of immunoglobulin response, in cell cultures 75:77 systemic toxicity of 64:71, 73 tissue storage of	mortality ratios in 64:109, 149 observed deaths in 64:109 Nitrates in tobacco smoke 67:128 Nitric oxide exposure to 64:266 as probable contributor to health hazards of smoking 72:144 Nitrogen gas phase, cigarette smoke

Nitrogen dioxide	carcinogenicity
64:60, 266 ciliastatic effect of	67:127
64:268	carcinogenicity in cigarette smoke 71:264-266
effect on AHH activity	determination in cigarette and tobacco
74:52	smoke condenstate
effect on alveolar wall cells in guinea pigs	73:87, 88
73:50	esophageal neoplasms induced in animals
effect on bacterial retention in hamsters 73:54	by
effect on bactericidal activity in mouse	71:292 in tobacco smoke
lung	67:127
74:103	N-nitrosoanabasine
effect on pulmonary physiology, in ani-	69:62
mals	N-Nitrosoheptamethyleneimine
74:102-103	incidence of lung neoplasms, in rats 75:49
effect on pulmonary physiology, in mon- keys	N-nitrosonornicotine
74:103	in tobacco
effects on rats' lungs	69:62; 75:48, 49
69:41; 72:46, 47; 73:49, 50	Nonrespondents
in emphysema etiology	age adjusted death rates in
72:46	64:114
obliterative fibrosis from 64:266	magnitude of, in surveys
as probable contributor to health haz-	64:97 mortality ratios in
ards of smoking	64:116
72:144	proportion of smokers in
pulmonary changes in rodents chroni-	64:114
cally inhaling	Nonresponse bias
71:161, 220	64:96, 104, 115
pulmonary edema from 64:266	Nonsmokers
toxic action of	age-adjusted mortality in 64:100
64:295	by age and sex, U.S.
Nitrogen oxides	64:178
64:296, 297	airway resistance in
as air pollutants in cigarette smoke 74:124, 125	64:292, 293
in cigarette smoke	allergic and irritative reactions to ciga- rette smoke
64:296, 297	72:128, 129
effects on resistance of squirrel monkeys	allergic skin reactions in
to pneumococcus	64:319
71:173	allergic symptoms in, from tobacco
pharmacology of 64:266	smoke exposure
smoke content of	72:110, 111
64:266	bladder neoplasm risk in 64:222
Nitroglycerine	bladder neoplasms in
effect on blood circulation in coronary	64:223
disease patients	body weight of
67:61-62 effect on blood circulation in normal	64:384, 385
individuals	carboxyhemoglobin effects on oxygen
67:61-62	uptake 71:61
4-Nitroquinoline 1-oxide	carboxyhemoglobin levels in
alcoholic solution of, development of	72:125
papillomas in mice drinking	chronic cough prevalence in
71:292 Nitrosamines	64:299, 302
effect on lactating hamsters	coronary diseases rate in
73:139	64:322, 323
role in respiratory tract carcinogenesis,	emphysema in
	64.207
in animals	64:297 epithelial changes in
	epithelial changes in
in animals	

extroversion in 64:366	mortality rates, by amount smoked 67:147
forced expiratory volume in 64:290, 291	mortality rates, by smoking classification 67:147
hemoglobin concentration in	Noxious gases
64:319	exposure magnitude of
1.Q. measurement of	64:296, 297
64:370	in respiratory diseases
liver cirrhosis in	64:279
64:342	Nutritional deficiency
lung neoplasms in 64:118, 184, 191, 193, 230, 232	64:341
morphology of	
64:385, 386 mortality rates in	
64:100, 102, 117, 118	Oat cell carcinoma
mortality ratios in	see Carcinoma, oat cell
64:163, 202, 301	Obesity
occupational factors in	64:38, 321, 355
64:187	coronary diseases mortality and
oral neoplasms	64:321;71:43
64:202	relationship to smoking and CHD
passive smoking and	71:43-45
<b>72</b> :121-125	relationship to smoking in peripheral
as percent of population	arteriosclerosis
64:114	71:72
pneumoconiosis in	as risk factor for CHD 72:16: 73:9
64:298	Occupational diseases
psychosomatic disorders in 64:367	asbestosis
respiratory conditions in	73:41
64:289	asbestosis, in asbestos workers, in Singa-
risk ratios in	pore
64:222, 223, 230, 232	74:95
urban-rural mortality in	bronchitis
<b>64</b> :186, 194	72:42
U.S., by age	bronchitis and respiratory tract irrita-
64:178	tion, in rubber industry workers
see also Smokers vs. nonsmokers	74:96 bronchitis, in cement and rubber in-
Norepinephrine 64:318	dustry workers
effects of nicotine	74:95, 96
75:29	bronchitis, in wool and cotton textile
Nornicotine	workers
69:62	74:93, 94
structurai formula	byssinosis
64:49	73:39, 41
North Dakota studies	byssinosis, in cotton and wool textile
64:323 Norway	workers
coronary death rates in	74:93, 94
64:320	byssinosis in cotton millworkers
incidence rates of lung neoplasms 69:55-56	75:68 chronic obstructive pulmonary disease
lung neoplasms in, for pipe smokers	72:3, 42-44 chronic obstructive pulmonary disease,
71:244	in autoworkers
lung neoplasms mortality in relationship	74:80
to tobacco use	chronic obstructive pulmonary disease,
64:176; 71:245-246	in firemen
neoplasm risk in	7 <b>5</b> :68
64:127 tracheobronchial tree changes in smokers	coal workers' pneumoconiosis
and nonsmokers of	73:42
71:259	lung neoplasms in uranium miners
Nose	75:47
effect of smoking	pneumoconiosis
64:275 Nose neoplasms	72:42-44 pulmonary fibrosis
64:193	72:44
	,

and risk of neoplasms	rubber industry fumes and smoking
75:43 smoking and	74:96 smoking and
72:3, 42-44;74:93-96;75:68-70	72:3, 4, 42-44; 73:39-44
see also Occupational factors; Occupa- tional hazards; Occupations	smoking as additive risk for COPD 73:55
Occupational factors	textile dust exposure and smoking
64:224 chronic bronchitis and	74:93-96 uranium exposure
64:298, 299, 300, 302	67:35
coronary disease and 64:321, 322; 73:5, 7	see also Occupational diseases; Occupa
lung neoplasms and	tional factors; Occupations Occupations
64:95, 187, 193, 194, 232	asbestos workers, lung neoplasm morbid
mortality and 64:112, 134	ity 67:143
smoking prevalence and	asbestos workers, lung neoplasm mortal
64:362, 363	ity and smoking
see also Occupational diseases; Occupa-	71:257 asbestos workers, respiratory tract car
tional hazards; Occupations Occupational hazards	cinoma
64:100, 101, 232	71:256
air pollution exposure in Boston police-	bank employees, smoking and COPD 71:198
men 74:82, 83	coal miners, impaired pulmonary func
asbestos exposure	tion in smoking
67:35; 73:41	71:163 coal miners, respiratory tract carcinoma
asbestos exposure and smoking as factors in lung neoplasm development	71:256
74:41-43; 75:49	coal miners, smoking and COPD
in bladder neoplasms 64:222	71:153, 197, 218-219 coal miners, smoking and ventilatory
bladder neoplasms, and smoking	function
73:78	71:207
carboxyhemoglobin levels in workers ex- posed to exhaust gases	flax mill workers, smoking and COPD 71:199
75:21	government employees, blood pressure
coal dust exposure	differences in smokers vs. nonsmok
73:41-43 from coal tar	ers 71:99
64:147	longshoremen, mortality from smoking
cotton, flax, and hemp dust exposure 73:39-41	related cerebrovascular disease 71:70
dust exposure	longshoremen, mortality rates from CHD
73:43, 44	in
exposure to chemicals, fumes, sprays and dusts, in smokers vs. nonsmokers, by	71:28 longshoremen, smoking and COPD
race and sex	71:28
75:69, 70 exposure to 100% pure oxygen	longshoremen, smoking and ventilatory function
73:43	71:208
higher reporting of exposure to, by	medical students, serum lipid differences
smokers vs. nonsmokers 75:68	in smokers vs. nonsmokers 71:98
in lung neoplasms	medical students, smoking and nicotine
64:232	effects on blood lipid levels
myocardial infarction as 64:323	71:124 medical students, smoking and thrombo-
nitrogen dioxide in	sis relationships
64:266	71:130
pancreatic neoplasms and 73:77	medical students, smoking and ventila- tory function
pulmonary disease from	71:209-210
64:266, 298, 299, 300, 302	mortality rates, smokers vs. nonsmokers
radiation exposure in uranium miners 73:72	bу <b>67</b> :11
risk ratios in	nickel workers, lung neoplasms in
64:31, 134	71:256

physicians, bladder and kidney neoplasms in smoking 71:293, 294 physicians, cessation of smoking effect on COPD 71:142 physicians, COPD mortality rates physicians, decline in cigarette smoking rates 71:48 physicians, mortality from smokingrelated cerebrovascular disease 71.68 physicians, mortality rates from CHD 71.26 physicians, mortality ratios from esophageal neoplasms 71:290 physicians, mortality ratios from peptic ulcer in smoking and nonsmoking physicians, pulmonary function following cessation of smoking 71:149 physicians, smoking and ventilatory function 71:209-210, 213 plant workers, occupational exposure and smoking relationships to COPD 71:153, 218, 219 plant workers, smoking and COPD 71:198
plant workers, smoking and ventilatory function 71:206-208 post office workers, blood pressure differences in smokers vs. nonsmokers 71:104 post office workers, smokers and ventilatory function 71:209 post office workers, smoking and COPD 71:200, 202 prisoners, serum lipid differences in smokers vs. nonsmokers 71:100 prisoners, smoking and nicotine effects on peripheral vascular system 71:133 railroad employees, mortality and morbidity, CHD and smoking 71:28.34.97 and respiratory symptoms by smoking habit 67:97 smelter workers, lung neoplasm mortality from arsenic exposure 71:257 smoking habit for 67:143 soldiers, smoking and COPD 71:197 steel workers, COPD development from dust exposure students, carbon monoxide effects on blood lipids 71:129

smokers vs. nonsmokers 71:228-229 students, mortality from smoking-related cerebrovascular disease 71:68 students, mortality rates from CHD 71:28 students, smoking and COPD 71:201 students, smoking and nicotine effects on blood lipid level 71:125 students, smoking and thrombosis relationships 71:130 students, smoking and ventilatory function 71:211 telephone company employees, smoking and COPD 71:200 textile workers, occupational exposure and smoking relationship to COPD 71:218-219 transportation workers, air pollution relationship to COPD 71:198, 202 transportation workers, smoking and COPD 71:198, 202 transportation workers, smoking and ventilatory function 71:207, 212 uranium miners, lung neoplasms in smokers and nonsmokers 71:256 uranium miners, lung neoplasms morbidity by smoking habit for 67:143 utility company employees, CHD morbidity in smoking 71:30 veterans, bladder and kidney neoplasms in smoking 71:294-295 see also Occupational diseases; Occupational factors; Occupational hazards Office of Science and Technology 64:8 Oleic acid suspected carcinogenic agent in cigarette smoke 71:266 Olive oil penetrability of benzo(a)pyrene in mice esophageal epithelium 71:292 Opium 64:349 Optic nerve atrophy, and cyanide in tobacco smoke 67:183 sensitivity, amblyopia from 64:341 Oral diseases, non-neoplastic smoking and

69:5-6, 85-87; 72:6

students, infectious respiratory disease in

Oral hygiene relationship to smoking and noncancer-	recurrent, incidence in smokers vs. ex-
ous oral disease 69:85-86	73:71, 74-75 relationship of tobacco use
smoking and 72:6	71:285, 289, 361-367 relative risk in tobacco smokers and
Oral mucosa	chewers
64:203 effect of carcinogens in laboratory ani-	72:70 relative risk of development in pipe,
mals 72:70	cigar, and cigarette smokers vs. non- smokers
effect of cigarette smoke 72:6, 69	73:191, 194, 195 retrospective studies of
effect of reverse smoking	64:198, 199, 200, 201
72:69 effect of tobacco/bidi smoking and	reverse smoking in 64:203, 204; 73:76
chewing 72:69	risk gradients in, by amount smoked 64:233
Oral neoplasms 64:37, 196-204, 233	risk ratios in, in females 64:134
alcohol consumption and smoking in etiology of	smoking induced increase in 64:197
73:193; 74-53-55 amount smoked in	smoking in etiology of 64:204; 69:58; 71:289; 72:4, 67-70;
64:233	73:74-76
cigar smoking in 64:189	snuff in 64·233
epidemiologic studies	summary of previous findings on rela-
64:196-202; 74:53-55 estimated incidence in U.S. for 1970	tionship to smoking 74:52, 53
71:284	summary of retrospective studies
experimental induction of 64:233	73:194, 195 and tobacco chewing
incidence of secondary primary, in smokers vs. nonsmokers	69:58 urban-rural factors in
75:50	64:133
income gradients in 64:134	in waiters 64:134
inhalation patterns and	see also Gingival neoplasms; Mouth neo-
73:191 mortality rates in	plasms; Oropharyngeal neoplasms Oral ulceration
64:37, 133; 71:285	reverse smoking in
mortality rates in, in females 64:131, 132	64:203 Organ cultures
mortality rates in, in foreign born	cigarette smoke effects on cell growth
64:134, mortality rates in, in Irish	and reproduction in 71:267, 343-345
64:135	Oropharyngeal neoplasms
mortality rates in, in males, 64:130, 132	64:201 frequency in smokers and nonsmokers
mortality rates in Japanese male smokers	71:238
vs. nonsmokers 73:74	Oxidoreductases reduction of, in smokers' alveolar macro-
mortality ratios for pipe, cigar, and	phages
cigarette smokers vs. nonsmokers 73:191-193	69:42-43 Oxygen
mortality ratios in	in cardiac function
64:113, 202 mortality ratios in, in cigarette smokers	64:318
64:149	debt, effect of smoking 73:246, 247
mortality trends in 64:137	debt, exercise performance and
neoplasm site by tobacco use in 64:197	73:246, 247 myocardial consumption of, following
pipe smoking in	nicotine stimulation
64:37, 150, 189; 72:67 prevalence of, decline in	71:58, 75 in smoke
64:204	64:60

tension, smokers vs. nonsmokers	relative risk in men by number of ciga-
72:22 transport in body, carbon monoxide	rettes smoked 74:55
effects 71:60, 75	smoking and, 67:36, 158-159; 69:60-61; 71:13,
uptake in nonsmokers with specific	238, 298-299; 72:5, 68, 74; 73:77
carboxyhemoglobin levels	summary of previous findings on rela-
71:61, 75	tionship to smoking
Ozone	74:55
ciliastasis from	Pancreatic secretions
64:268	bicarbonate content, effect of smoking
irritation action of	73:159, 160
64:295	effect of nicotine in animals
Ozonized gasoline	73:161, 162
<b>64</b> :166	Papain
	pulmonary effects on rats exposed to cigarette smoke with 71:163
Pachyderma oralis	Paper chromatography
64:203	64:51, 57
Palatal mucosa	Papillomas
64:275	64:142, 165
Palatal neoplasms	development in mice drinking alcoholic
64:204	benzopyrene
see also Mouth neoplasms; Oral neo-	71:292
plasms	formation following skin painting with
Palate	smoke tars
hamster, C-14 labeled smoke particulates	71:337-339, 341
deposition in	induction in hamsters exposed to ben-
71:281-282 smoking and stomatitis nicotina	zo(a)pyrene
69:87	71:346-347
Pancreatic neoplasms	induction of
incidence in cigar/pipe and cigarette	64:142, 143, 144, 203, 223 transformation of
smokers vs. nonsmokers	64:144
74:55, 56	Papillomas, benign
mortality rates, by age	64:142
67:158-159	origin of,
mortality rates, by amount smoked	64:165
67:159	tar induced, in mice
mortality rates, by sex	64:223
67:158	Paraffin
mortality rates, by smoking classification 67:159	64:147
mortality rates, for women	Paralysis
67:153	of ganglionic nerve cells 64:69
mortality rates in United States	Paralysis agitans
72:74	mortality rates, smokers vs. nonsmokers
mortality ratios, by age	67:8
67:158-159	Parasorbic acid lactone
mortality ratios, by age and amount	64:145
smoked	Parathion
67:159	<b>62</b> :145
mortality ratios, by sex	Parents
67:158	incidence of penumonia and bronchitis
mortality ratios, for men by smoking	in children of smokers
classification 67:159	75:105, 106
mortality ratios, for women	influence 64:369, 370
67:153	prevalence of respiratory symptoms in
mortality ratios in Japanese male and	children of smokers
female smokers	75:102, 103
72:74	smokers cough and phlegm production,
occupational exposure and	and respiratory symptoms in children
73:77	75:103
relationship of smoking to mortality	see also Smoking, parental
from	Paris green
71:298-299	64:61